

**WE CLAIM AS OUR INVENTION:**

1. An acoustic module for a hearing aid device comprising a unit adapted for insertion in the hearing aid device comprising an acousto-electrical transducer and an electro-acoustical transducer, said acousto-electrical transducer and said electro-acoustical transducer having feedback associated therewith, and said unit further comprising a signal-processing unit for suppressing said feedback.

2. An acoustic module as claimed in claim 1 wherein said unit comprises a carrier structure to which said acousto-electrical transducer and said electro-acoustical transducer are connected.

3. An acoustic module as claimed in claim 1 wherein said unit comprises a housing containing said acousto-electrical transducer, said electro-acoustical transducer and said signal-processing unit.

4. An acoustic module as claimed in claim 1 wherein said acousto-electrical transducer comprises a directional microphone.

5. An acoustic module as claimed in claim 1 wherein said acousto-electrical transducer comprises a plurality of microphones.

6. An acoustic module as claimed in claim 5 wherein said plurality of microphones forms a directional microphone system.

7. An acoustic module as claimed in claim 1 wherein said unit comprises vibration-damping materials.

8. An acoustic module as claimed in claim 1 further comprising an attachment arrangement adapted to attach said unit in said hearing aid device.

9. An acoustic module as claimed in claim 8 wherein said attachment arrangement is adapted to fixedly connect said unit in said hearing aid device.

10. An acoustic module as claimed in claim 8 wherein said attachment arrangement is adapted to detachably connect said unit in said hearing aid device.

11. An acoustic module as claimed in claim 8 wherein said attachment arrangement is adapted to damp vibrations between said unit and said hearing aid device.

12. An acoustic module as claimed in claim 1 wherein said signal-processing unit suppresses feedback between said acousto-electrical transducer and said electro-acoustical transducer.

13. An acoustic module as claimed in claim 1 wherein said hearing aid device comprises a hearing aid signal-processing unit, and wherein said unit is adapted for connection to said hearing aid signal-processing unit.

14. An acoustic module as claimed in claim 13 wherein said unit comprises plug contacts adapted to connect said unit to said hearing aid signal-processing unit.

15. An acoustic module as claimed in claim 13 wherein said signal-processing unit suppresses feedback between said electro-acoustical transducer and said acousto-electrical transducer.

16. An acoustic module as claimed in claim 1 wherein said unit comprises shielding against external electromagnetic fields.

17. A hearing aid device comprising:

a unit comprising an acousto-electrical transducer and an electro-acoustical transducer and a signal processor for suppressing feedback associated with said acousto-electrical transducer and said electro-acoustical transducer; and

a hearing aid signal processor having a recess therein in which said unit is received, said unit being mechanically and electrically connected to

said hearing aid signal processor and said hearing aid signal processor processing signals between said acousto-electrical transducer and said electro-acoustical transducer dependent on a hearing impairment of a user of the hearing aid device.

18. A hearing aid device as claimed in claim 17 wherein said hearing aid signal processor comprises a mounting for receiving said unit.

19. A hearing aid device as claimed in claim 17 wherein said unit comprises a carrier structure to which said acousto-electrical transducer and said electro-acoustical transducer are connected.

20. A hearing aid device as claimed in claim 17 wherein said unit comprises a housing containing said acousto-electrical transducer, said electro-acoustical transducer and said signal-processing unit.

21. A hearing aid device as claimed in claim 17 wherein said acousto-electrical transducer comprises a directional microphone.

22. A hearing aid device as claimed in claim 17 wherein said acousto-electrical transducer comprises a plurality of microphones.

23. A hearing aid device as claimed in claim 22 wherein said plurality of microphones forms a directional microphone system.

24. A hearing aid device as claimed in claim 17 wherein said unit comprises vibration-damping materials.

25. A hearing aid device as claimed in claim 17 further comprising an attachment arrangement to attach said unit in said recess.

26. A hearing aid device as claimed in claim 25 wherein said attachment arrangement is adapted to fixedly connect said unit in said recess.

27. A hearing aid device as claimed in claim 25 wherein said attachment arrangement is adapted to detachably connect said unit in said recess.

28. A hearing aid device as claimed in claim 25 wherein said attachment arrangement damps vibrations between said unit and said hearing aid signal processor.

29. A hearing aid device as claimed in claim 28 wherein said signal-processing unit in said unit suppresses feedback between said acousto-electrical transducer and said electro-acoustical transducer.

30. A hearing aid device as claimed in claim 17 wherein said unit comprises plug contacts connecting said unit to said hearing aid signal processor.

31. A hearing aid device as claimed in claim 17 wherein said unit comprises shielding against external electromagnetic fields.